THE *SPALACOPSIS* OF THE WEST INDIES AND AMERICA NORTH OF MEXICO (COLEOPTERA: CERAMBYCIDAE)

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Abstract

The taxonomy and distribution are discussed for the 9 species and 2 subspecies found in America north of Mexico and in the West Indies. A key is presented for separation of the species, and the following new species are described: *Spalacopsis (s. str.) chemsaki* from Florida, *Spalacopsis (s. str.) unicolor* from Puerto Rico, *Spalacopsis (Euthuorus) macra* from Jamaica, and *Spalacopsis (E.) filum brevialatum* from the Dominican Republic. *Spalacopsis confusa* Casey, *scapalis* Casey, *suturalis* Hamilton, *pertenuis* Casey, and *exilis* Casey are reduced to synonymy. The validity of *Spalacopsis grandis* (Chevrolat) is questioned, and *Spalacopsis lobata* Breuning is resurrected from synonymy. Drawings, photographs, and distribution maps are included.

The lamiine genus *Spalacopsis* has previously been placed into several tribes; the Hippopsini, the Spalacopsini, and more recently into the Agapathiini (Breuning, 1962). Much information on the biology, immature stages, and morphology is needed before the taxonomic placement of *Spalacopsis* is totally clear. It is most similar to the Ethiopian-Oriental genus *Tetraglenes.*

Spalacopsis is unique in having small circular eyes (proposed to be the result of the degeneration and loss of the lower lobe and connecting row of facets by Tyson, 1970). The slender, elongate form and fimbriated antennal segments are also characters of generic value. Subgenera were proposed by Casey (1913:355) but he failed to define them. This treatment of the genus will include the subgenera.

The members of the genus have apparently evolved toward an apterous state. Of those species covered in this paper, only *filum s. str.* and *filum costulatum* have and utilize fully developed wings. Other species such as *lobata* (a Mexican species) and *filum brevialatum* n. ssp. have abbreviated hind wings. Members of the subgenus *Euthuorus,* such as *macra* n. sp., *ornatipennis,* and the Central American *variegata,* have only slender filaments. All examined members of the subgenus *Spalacopsis* have only small pads or slender filaments and the elytra are fused along the suture.

Sexual dimorphism occurs only in 2 species of those covered (*macra* n. sp. and *ornatipennis,* both of Jamaica). In these 2 species the form and/or pubescence of the apices of the elytra differ in each sex. Sexing specimens has presented problems in the past (Casey 1913:357). The abdomen, viewed from the rear, shows the 8th tergite protruding from the anal opening (Fig. 13) in the male. It is reduced and not protruding in the female (Fig. 10). In most cases the abdomen of the male is thinner and each segment is slightly constricted.

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Male terminalia of most species were examined but no distinctive characters were found.

There is no published information on the biology of this genus. Craighead (1923:134) briefly described the larva of *Spalacopsis stolata* and recorded the host as Jerusalem oak (*Chenopodium botrys*). Hamilton (*in* Leng & Hamilton, 1896:145) recorded *Melothria pendula* as the host of *filum costulatum*. T. H. Farr (Institute of Jamaica, per. com.) stated that *filum s. str.* is almost always beaten from tangles of vines (*Ipomoea* sp.), and that he has reared a single specimen from this plant. Specimens of *Spalacopsis (E.) filum costulatum* Casey were beaten from the vine *Calonyctium aculeatum,* also a member of the family Convolvulaceae, in southern Florida. Most of the apterous species are taken by beating vegetation, but several specimens have been taken at light.

Although the genus has been partially or wholly reviewed (Casey, 1913; Breuning, 1962), both authors failed to check the appropriate types. This has led to much confusion in the validity of names and the correct placement of synonyms. The great amount of variation within each species can easily cause confusion. Original describers often did not describe salient characters needed for separating their form from other described species.

Types of the following species have been examined (those with asterisks were by a photo only). *Spalacopsis confusa* Casey; *costulata* Casey; *exilis* Casey; *fusca* Gahan*; *grandis* Chevrolat*; *howdeni* Tyson; *lobata* Breuning*; *ornatipennis* Fisher; *pertenuis* Casey; *phantasma* Bates*; *protensa* Pasco*; *scapalis* Casey; *similis* Gahan*; *spinipennis* Fisher; *stolata* Newman; *suffusa* Newman; *suturalis* Hamilton; *texana* Casey; and *variegata* Bates*.

SPALACOPSIS NEWMAN

Spalacopsis Newman, 1842:303,305; Agassiz, 1846:150; Melsheimer, 1853:110; Thomson, 1860:366; Lacordaire, 1872:704; Bates, 1880:129; LeConte & Horn, 1883:330; Henshaw, 1885:104; Leng & Hamilton, 1896:146; Casey, 1913:354; Aurivillius, 1922:361; Breuning, 1962:41; Arnett, 1968:893; Tyson, 1970:484.
Eutheia Guerin, 1844:247; Pasco, 1858:264; Lacordaire, 1872:704.
Spacalopsis LeConte, 1852:145 (lapsus for *Spalacopsis*).
Systene Pasco, 1858:264.

Type Species: *Spalacopsis stolata* Newman.

Body elongate and subcylindrical. **Head:** antennae arising from distal, dorsal margins, as long as body or slightly longer, bases approximate, scape robust and elongate, reaching to basal half of pronotum, distal segments with few to many mostly straight hairs (*Spalacopsis s. str.*) or with many hairs sinuate (*Euthuorus*); eyes oval to slightly quadrate, not emarginate nor divided, usually with 1 to 3 sensory setae about the region of the eye; mouthparts at ventral, basal area of head, maxillary palpi approximately twice the length of labial palpi. **Thorax:** subcylindrical, usually as long or longer than head, disc with a linear, median, polished callus; prosternum abbreviated at sides for reception of mouthparts when head in repose, prosternal process greatly expanded behind coxae. **Elytra:** free with wings fully developed, abbreviated, or reduced to filaments (*Euthurous),* or elytra fused along the suture with wings reduced to pads or filaments (*Spalacopsis s. str.*), apices

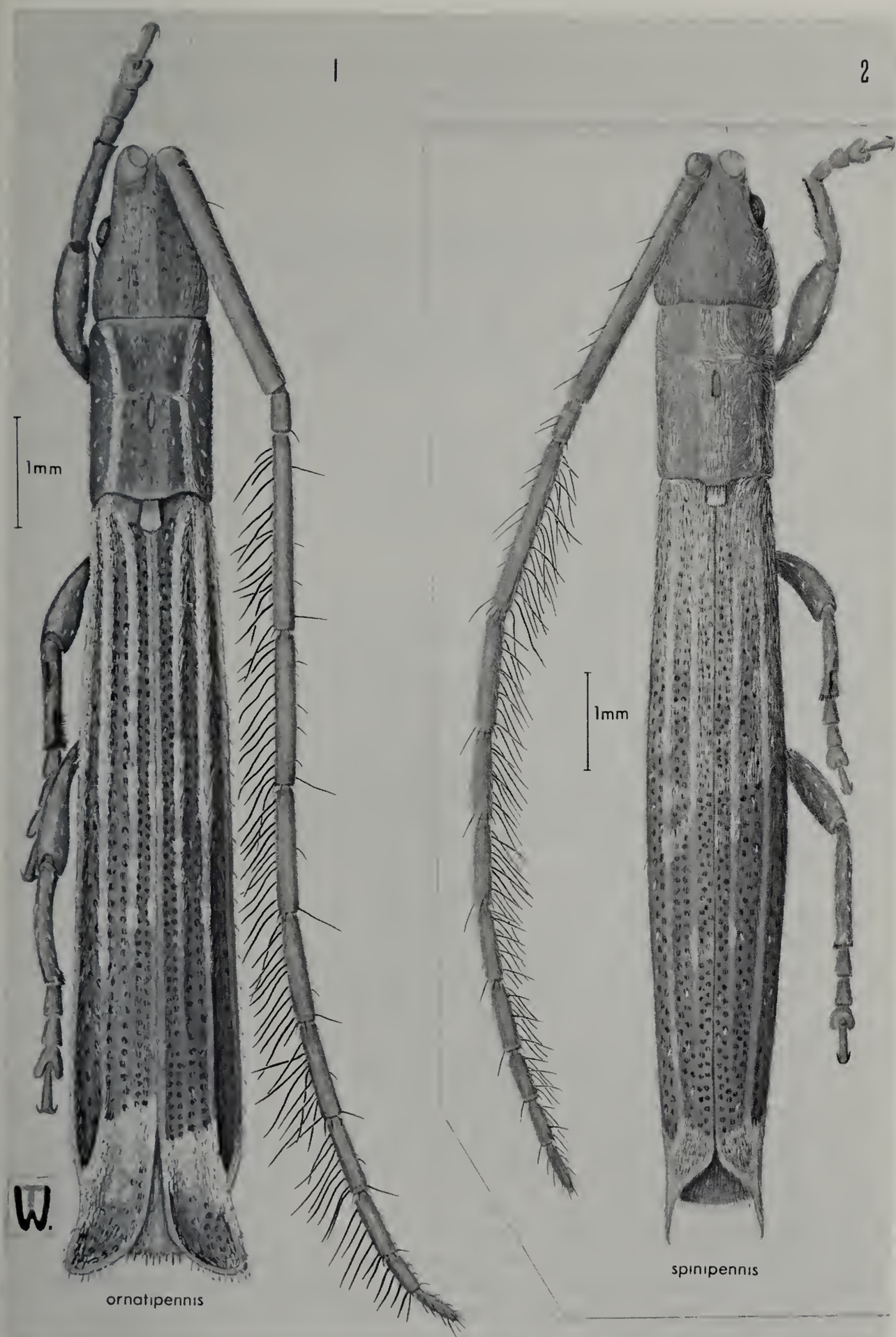

Fig. 1. *Spalacopsis (Euthuorus) ornatipennis* Fisher, female; 2. *Spalacopsis (E.) spinipennis* Fisher, female.

tapering and usually asymmetrical (*Spalacopsis s. str.*) or lobed, declivous, spiniform, diverging, or infrequently tapering (*Euthuorus*). **Legs:** short, femora clavate, fore and mid tibiae usually with a dorsal sinus which is margined with a comb of stout spines, fore tibia with a small tooth on apical mesal margin, tarsi spongy beneath, third segment cleft nearly to base, tarsal claws divergent.

KEY TO THE *SCALACOPSIS* OF THE WEST INDIES AND AMERICA NORTH OF MEXICO*

1. Elytra with suture not fused, apex usually as wide or wider than middle, apices spiniform, lobate, broadly rounded or tapering; species alate or apterous ..... Subgenus *Euthuorus* 2

1′. Elytra with suture fused, apex narrower than middle, apices tapering, slightly divergent and usually asymmetrical; apterous ..... Subgenus *Spalacopsis s. str.* 7

2(1). Elytral pubescence largely variegated with a preapical or apical oblique or transverse light colored band or line; apterous 3

2′. Elytral pubescence uniform or, if variegated, without an apical or preapical band, line, or group of spots; alate or apterous 5

3(2). Elytral apices broadly rounded or slightly produced, not spinose; Jamaica 4

3′. Elytral apices spinose; Cuba ..... *spinipennis* Fisher

4(3). Elytra with a white preapical band (female) or with apices dark and margined with an oblique white line (male); scutellum rounded at apex ..... *ornatipennis* Fisher

4′. Elytra with apices light colored; scutellum triangular, apex acute ..... *macra* n. sp. (female)

5(2). Elytra parallel sided, not inflated medially; alate; scutellum broadly rounded apically 6

5′. Elytra noticeably inflated medially; apices broadly, separately rounded; scutellum triangular; apterous ..... *macra* n. sp. (male)

6(5). Integument of ventral surface, femora, and head piceous; pubescence mostly greyish; denuded areas of elytra usually expanded and lineate; West Indies ..... *filum filum* (Klug)

6′. Integument light reddish-brown to brown, mostly covered by dense yellow or yellow-grey pubescence; denuded areas of elytra usually as ovoid spots on the apical half; Florida ..... *filum costulatum* Casey

6″. Integument brown; denuded areas of elytra greatly expanded, pubescence restricted to irregular patches; apices tapering and somewhat pointed, not declivous; hind wings 0.5 the length of the abdomen; Dominican Republic ..... *filum brevialatum* n. ssp.

*Because of the intraspecific variation and the poor condition of many of the specimens, usually only 70-80% of those examined will successfully key out. In some cases the collection locality is the best means for separation.

7(1). Head and scape with pubescence sparse to moderately dense, not obscuring surface 8
7′. Head and scape with pubescence dense, surface for the most part obscured; eastern Florida ..... *stolata* Newman

8(7). Elytra uniformly pubescent, either sparsely or densely so 10
8′. Elytra with denuded areas and areas of condensed pubescence 9

9(8). Integument reddish-brown to brown; elytra with sutural area and costal intervals partially denuded, lateral margins usually densely yellow-grey pubescent; western Florida ..... *suffusa* Newman
9′. Integument dark brown; elytra with small condensed areas of white pubescence on the discal costae; lateral margins usually without dense yellow-grey pubescence; coastal Texas ..... *texana* Casey

10(8). Elytra densely, uniformly grey pubescent; Puerto Rico ..... *unicolor* n. sp.
10′. Elytra sparsely and uniformly grey pubescent; Florida ..... *chemsaki* n. sp.

SUBGENUS *Euthuorus*

Euthuorus Duval, 1857 (*in* Sagra):276; Chevrolat, 1862:255; Casey, 1913:355.

Type Species: *Euthuorus filum*, Duval

Individuals of this subgenus are extremely variable in elytral configuration but always have the elytra free, not fused along the suture. The flight wings vary from fully developed to small filaments.

Spalacopsis (Euthuorus) filum filum (Klug)
(Fig. 8, 16)

Hippopsis filum Klug, 1829:13.
Euthuorus filum, Duval, 1857 (*in* Sagra): 276; Chevrolat, 1862:256.
Eutheia filum, Lacodaire, 1872:704.
Spalacopsis linum, Leng & Hamilton, 1896:145 (in part, lapsus for *filum*).
Spalacopsis filum, Blatchley, 1920:96 (in part); Aurivillius, 1922:361; Casey, 1924:293 (in part); Wolcott, 1948:341; Breuning, 1962:43.

MALE: Head as long as pronotum, densely covered with greyish-brown pubescence; antennae as long as or surpassing elytral apex by 1 segment, segments from 3rd densely fimbriated with strongly sinuate hairs, scape elongate, reaching to middle of pronotum. Pronotum densely covered with greyish pubescence which obscures all of integument except small polished callus on the middle of disc, both head and pronotum with lateral and a medial longitudinal whitish line. Scutellum slightly elongate, parallel sided and rounded at apex, densely covered with whitish pubescence. Elytra parallel sided, approximately 5 times as long as wide, apex abruptly declivous; pubescence greyish to yellow-grey with small patches of whitish hairs on the discal costae and brownish hairs in denuded areas, denuded areas variable and prominent on apical fourth but expanded to base and coalesced into

linear lines on many specimens. Underside densely covered with greyish-brown pubescence, abdominal sternites each with 2 sensory setae located at middle of segment on either side of mid line, segments usually slightly constricted, 8th tergite with apex truncate. Length: 5 to 10mm.

FEMALE. Similar to male but averaging larger in size; denuded areas of elytra less prominent, abdominal segments usually not constricted. Length, 5 to 10mm.

TYPE: Cuba. The location of the type is unknown to me.

MATERIAL EXAMINED. Bahama Islands: Great Inagua Isl., Matthewtown, 31-I-1953, E. B. Hayden, G. B. Rabb, 1 male; Berry Islands, Fraziers Hog Cay, 30-IV-1953, E. B. Hayden, 1 male; South Binimi Isl., V-VI-1951, Gertsch & Cazier, 2 males, 4 females. Haiti: Port Au Prince, 1899, R. J. Crew, 1 female; Aux Cayes, 3-III-1898, E. A. Klages, 2 females; Williamson, 24-V-1930, H. L. Dozier, 1 male. Cuba: Cayamas, 23-I, 11-III, 28-V, E. A. Schwarz, 4 males, 1 female; Havana, 21-28-V, Wickham, 1 male; Caonao, VI-1923, Zavas, 1 female. Jamaica: *Trelawny*: Barbecue Bottom, 5-X-1959, T. H. Farr, 1 male, 1 female; Duncans, 13-25-VIII-1966, Howden & Becker, 3 males, 6 females; 2m W. Duncans, 16-VII-1959, T. H. Farr, 1 female; 2m W. Duncans, 25-XI-1959, T. H. Farr, 1 female; 5m W. Duncans, 3-II-1960, T. H. Farr, 1 female. *Portland*: Long Bay, 13-VIII-1959, T. H. Farr, 2 females; 2m S. Long Bay, 13-VIII-1959, T. H. Farr, 1 female. *Clarendon*: Salt River, 6-XII-1959, T. H. Farr, 1 male, 1 female; 2m N. Milk River, 19-XI-1959, T. H. Farr, 1 female; 2m E. Portland Cottage, 26-VIII-1959, T. H. Farr, 1 male; 3m N. May Pen, 18-VII-1959, T. H. Farr, 2 males; 1/2m E. Portland Cottage, 10-I-1960, ex. *Jaquemontia pentantha,* T. H. Farr, 1 male. *Westmorland*: 1m E. Savanna-la-Mar, 14,16-IX-1959, T. H. Farr, 2 females; 3m S. Glasgow, 16-IX-1959, T. H. Farr, 2 males; 2m S. Glasgow, 16-IX-1959, T. H. Farr, 1 male, 1 female; 2m W. Whitehouse, 16-IX-1959, T. H. Farr, 1 male, 1 female. *Hanover*: lucea, 15-VII-1959, T. H. Farr, 2 males; Lucea, 21-VII-1960, T. H. Farr, 2 females; 1/2m W. Hopewell, 21-XI-1959, T. H. Farr, 4 males. *St. Andrew*: Stony Hill, 25-VII-1966, H. Howden, 1 female; Hermitage Rd., 12-VII-1959, T. H. Farr, 1 male, 4 females; Hermitage Rd., 26-XI-1961, T. H. Farr, 1 female; Hermitage Rd., 11-XII-1960, T. H. Farr, ex. *Metastelma* sp., 2 males, 1 female; Dam Rd., 11-X-1959, T. H. Farr, 1 male; Clydesdale to Morces Gap, 8-VIII-1959, T. H. Farr, 1 male; Ferry, 19-II-1961, T. H. Farr, 1 male; Long Mt., 14-II-1960, T. H. Farr, 1 female. *St. Catherine*: Guanaboa Vale, 9-VIII-1964, T. H. Farr, 1 male, 2 females. *St. James*: 3m W. Flamingo, 19-VIII-1966, Howden & Becker, 1 female; 10m E. Montego, 3-II-1960, T. H. Farr, 2 females. *St. Elizabeth*: Goshen, 16-IX-1959, T. H. Farr, 1 male; Goshen, 27-VI-1959, T. H. Farr, 1 female; Munro, 5-III-1961, T. H. Farr, 1 female; Scotts Cove, 15-IX-1959, T. H. Farr, 1 female. *St. Ann*: Discovery Bay, 13-VII-1963, T. H. Farr, 1 female. *St. Thomas*: Morant Pt., 20-XII-1959, T. H. Farr, 3 males, 1 female; Morant Pt., 8-XI-1959, T. H. Farr, 3 males, 5 females; Morant Pt., 27-VI-1959, T. H. Farr, 1 male, 1 female; 12m E. Kingston, 1-I-1960, T. H. Farr, 1 female; 12m E. Kingston, 6-III-1960, T. H. Farr, 1 female; 12m E. Kingston, 29-XI-1959, T. H. Farr, 1 male, 1 female; 12m E. Kingston, 13-XII-1959, T. H. Farr, 1 male; 14 1/2m E. Kingston, 19-XI-1961, T. H. Farr, 1 female; 14 1/2m E. Kingston, 22-V-1960, T. H. Farr, 1 male; 16m E. Kingston, 9-VIII-1959, T. H. Farr, 2 males, 1 female; 17m E. Kingston, 6-IX-1959, T. H. Farr, 3 males, 2 females; 17m E. Kingston, 25-X-1959, T. H. Farr, 1 male, 1 female; Kingston region, IV-1906, Van Duzee, 1 male. *Manchester*:nr. Goshen, 16-IX-1959, T. H. Farr, 1 male. Puerto Rico: Guajataca, 8-II-1969, L. & C. W. O'Brien, 1 male.

This species is extremely variable in both size and amount of pubescence on the elytra. The specimens examined from Haiti and Puerto Rico are more

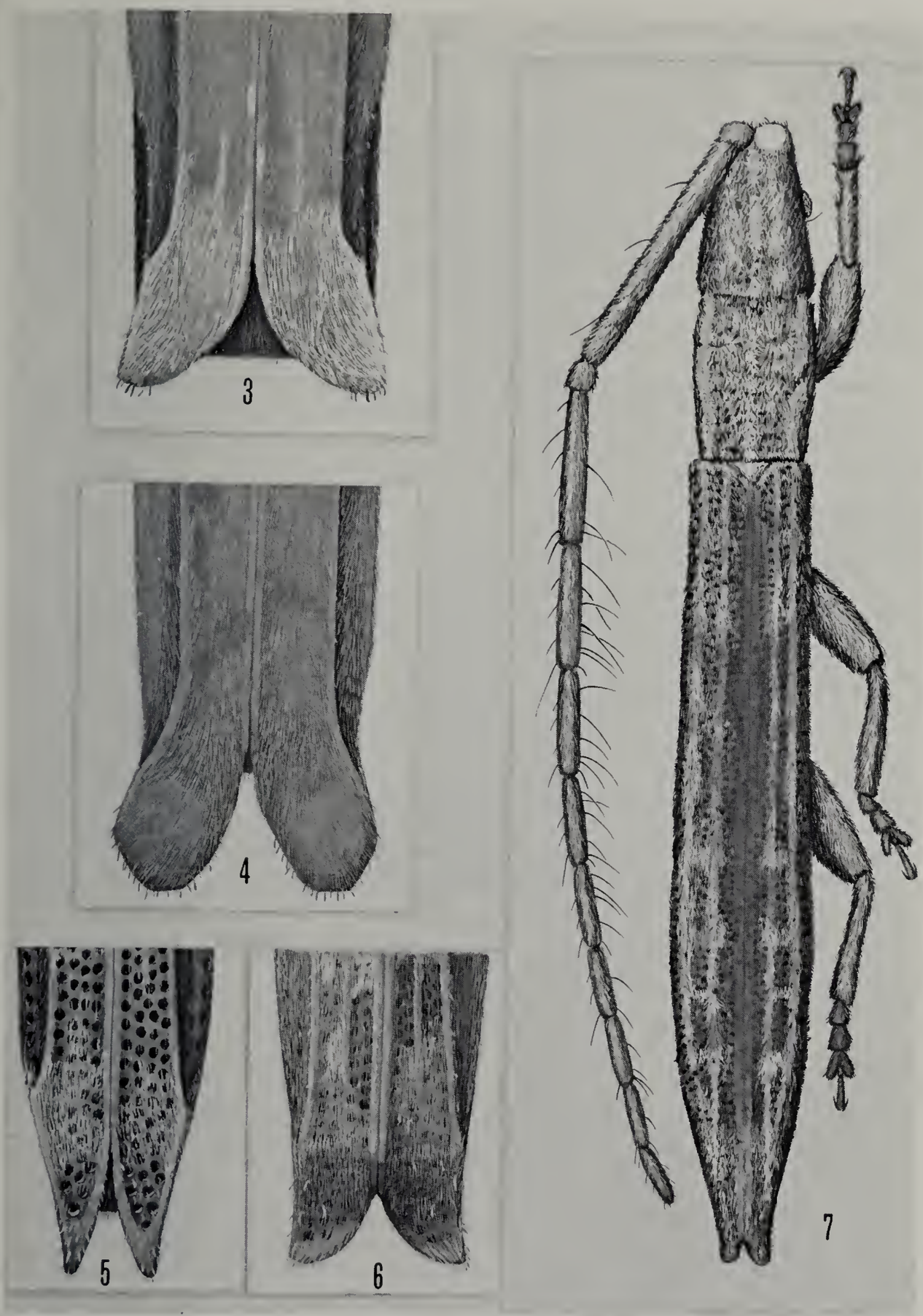

Fig. 3-4: *Spalacopsis (Euthuorus) macra,* n. sp. 3) dorsal view of elytral apex, female; 4) same view, male. Fig. 5: *Spalacopsis (E.) filum brevialatum,* n. spp., same view, male. Fig. 6: *Spalacopsis (E.) filum costulatum* Casey, same view, male. Fig. 7: *Spalacopsis (Spalacopsis) stolata* Newman, dorsal habitus, female.

maculate and have the elytral apex slightly tapering rather than declivous. Additional material from the areas mentioned above may prove this form to be distinct.

Spalacopsis (Euthuorus) filum costulatum Casey, New Combination.
(Fig. 6,9,10,11,16)

Spalacopsis filum, Aurivillius, 1922:361 (in part).
Spalacopsis linum, Leng & Hamilton, 1896:145 (in part, lapsus for *filum*).
Spalacopsis scapalis Casey, 1913:355; Aurivillius, 1922:361. New Synonymy.
Spalacopsis filum, m. *scapalis,* Breuning, 1962:44.
Spalacopsis confusa Casey, 1924:293. New Synonymy.
Spalacopsis costulata Casey, 1913:355; Aurivillius, 1922:361.

MALE: Integument reddish-brown to brown, pubescence yellow to yellow-grey with denuded areas of the elytra reduced basally, usually numerous only on the apical half of elytra and mostly ovoid in shape. Specimens examined averaged 1 to 3mm larger than *filum s. str.* Length: 5 to 13mm.

FEMALE: As in the male the denuded areas are restricted, the integument lighter in color, and individuals are larger than *filum s. str.* Length: 6 to 14mm.

TYPE: Holotype male, Florida, Biscayne Bay, E. A. Schwarz, Casey Collection (USNM); of *scapalis,* Florida, Palm Beach, Casey Collection (USNM); of *confusa,* Florida, Cape Sable, W. S. Blatchley, Casey Collection (USNM).

MATERIAL EXAMINED: Florida: *Dade Co.*: Coral Gables, 20-VI-1965, L. & C. W. O'Brien, 1 male, 1 female; Matheson Hammock, 11-IV-1951, H. & A. Howden, 1 female; Miami, 10-IV-1962, J. N. Todd, 1 female; Miami, 5-V, D. M. Castle, 5 males, 5 females; Miami, 3-IV, J. N. Knull, 1 male; Miami, III-1912, G. M. Green, 1 male; Miami, 5-III-1956, L. J. Daigle, 1 female; Miami, Hubbard & Schwarz, 1 female; Biscayne, 27-IV to 28-V, Hubbard & Schwarz, 12 males, 17 females; Biscayne Bay, E. A. Schwarz, 2 males; Biscayne Bay, A. T. Slosson, 1 male; Homestead, 4-IV-1952, J. P. Vockeroth, 1 male; Homestead, 5-III-1957, R. W. Swanson, 1 female; Paradise Key, 24-II-1919, 1 female; Paradise Key, II-1927, 1 female; Paradise Key, 29-III-1952, J. P. Vockeroth, 2 males. *Monroe Co.*: Key West, IV, Hubbard & Schwarz, 1 male; Key West, 18-III-1912, E. A. Schwarz, 1 female; Key West, 4 females; Key Largo, 5 females; Key Largo, 14-IX-1911, 1 male; Key Largo, 26-II-1919, 1 male; Key Largo, 5 males, 6 females; Key Largo Key, 3-IV-1966, H. V. Weems, 3 males; Key Largo Key, 1-I-1967, H. V. Weems, 1 male; Key Largo Key, 6-VI-1960, H. V. Weems, 1 female; Key Largo Key, 7-X II-1966, Woodruff & Knowles, 1 female; Key Largo Key, 26-II-1956, R. A. Morse, 1 male; Key Largo Key, 26-XII-1954, C. Weems, 1 female; Long Key, 28-III-1957, H. V. Weems, 1 male; L. Matecumbe Key, 31-III-1952, J. P. Vockeroth, 1 female; Summerland Key, 21-I-1933, C. F. Rainwater, 1 female; Marathon, 7-8-III-1919, E. A. Schwarz, 1 female; Plantation Key, 3-V-1952, H. V. Weems, 1 male, 1 female; Palma Vista Hammock, 1-XII-1961, Messenger, Hurd & Smith, 1 female; Flamingo, Everglades N.P., 4-II-1967, D. E. Bright, 1 female; Flamingo, Everglades N.P., 29-XI-1970, beating *Calonyctium aculeatum,* C. W. O'Brien, 2 males, 3 females; Cape Sable, 11-III-1960, J. L. Weaver, 1 female; Cape Sable, 1 male. *Collier Co.*: Marco, 9-IV-1912, 3 females. *Martin Co.*: Jupiter, 2-IV, Hubbard & Schwarz, 1 male; Jupiter, 24-IV, Hubbard & Schwarz, 1 male, 1 female. *Palm Beach Co.*: Lake Worth, Hubbard & Schwarz, 2 females; Lake Worth, 6-V, 1 male. *Osceola Co.*: Kissimmee, C. Palm, 3 males, 2 females. *Volusia Co.*: Enterprise, 14-V, D. M. Castle, 2 females; Enterprise, 14-VII, D. M. Castle, 1 female. Additional Florida material: Trail City, 7-IV-1952, O. Peck, 1 female.

The separation of this form and *filum s. str.* may sometimes be a difficult task. Of all the specimens of *filum* examined, *costulatum* ranges to a much larger size, average 2 to 3mm larger, has the pubescence yellowish rather than greyish, and has fewer denuded areas on the elytra. The smallest individuals of this form from the Florida Keys and the tip of mainland Florida tend to intergrade with *filum s. str.* Because of this, distribution may be the best means of separation on atypical and smaller specimens. Much more material from Cuba is needed before this complex can be fully understood. Casey's *scapalis* and *confusa* are heavily maculate specimens of *costulatum*. His name *costulata* is here emended to agree in gender with *filum*.

Spalacopsis (Euthuorus) filum brevialatum Tyson, New Subspecies
(Fig. 5)

MALE: Antennae as in *filum s. str.,* fimbriated from second segment, fimbriations greatly sinuated; head as long as pronotum, punctation confused, easily seen through reduced pubescence, separated by at least their diameters. Pronotum densely pubescent at middle in a wide longitudinal line enclosing the small linear callus. Scutellum rounded at apex and densely pubescent. Elytra as described for *filum s. str.* but pubescence reduced to irregular blotches and tapered apices not declivous; hind wings 0.5 the length of the elytra. Underside as in *filum s. str.* Length: 9mm.

FEMALE: Unknown.

TYPE: Holotype male, Dominican Republic: Samana Bay, Bosco del Infierno, 9-III-1928, G. S. Miller (USNM).

Structurally this form is similar to *filum s. str.,* but the tapered elytral apices, reduced hind wings, and the overall reduced pubescence will separate them. Only the type is known.

Fig. 8: Known distribution of the Jamaican species of *Spalacopsis.*

Spalacopsis (Euthuorus) ornatipennis Fisher
(Fig. 1,4)

Spalacopsis ornatipennis Fisher, 1935:200; Breuning, 1962:47.

MALE: Antennae longer than body by 2 segments, fimbriated beginning with segment 3; head slightly shorter than pronotum, densely covered with appressed ashy and grey-brown pubescence. Prothorax cylindrical, parallel sided with middle of disc concave, surface irregularly punctate, densely covered with grey-brown pubescence except for very thin medial callus; both head and pronotum with vague dorso-lateral and a medial, longitudinal lighter line. Scutellum elongate with apex rotundo-truncate and densely pubescent, whitish at base and blending to light ashy-brown at apex. Elytra at base as wide as pronotum, gradually widening to apex, generally covered with ashy pubescence, costae strongly elevated, basally with lighter pubescence which darkens near middle; apex margined with a thin, irregular, oblique whitish line, apices separately rounded and dark pubescent; hind wings reduced to filaments. Underside with integument piceous and covered with ashy-brown pubescence except for sterna which are ashy pubescent and have a median whitish line on sterna 2 to 4. Length: 7 1/2 to 11mm.

FEMALE: Very similar to male but with longitudinal lines of pubescence on pronotum more strongly evident. Elytra with basal half with whitish pubescence on costae and a wide, irregular, oblique whitish band above apices. Scutellum darker at base, whitish at apex. Underside lighter, sterna with median white lines joined to form a continuous line. Length: 10 1/2mm.

TYPE: Holotype female, JAMAICA: Mandeville, 1-4-IV-1906, E. P. Van Duzee (USNM).

MATERIAL EXAMINED: JAMAICA: *Manchester*: Christiana, 11-VI-1959, T. H. Farr, 2 males. *Trelawny*: Barbecue Bottom, 12-VII-1969, H. F. Howden, 2 males.

The sexual dimorphism exhibited by this species in its pubescent patterns makes identification difficult. The slightly lobed elytra apices places it in a group with *filum, macra* n. sp., and *lobata* of southern Mexico. The rotundo-truncate scutellar apex will separate this form from *macra,* and the ornamented elytra will separate it from *filum,* a smaller and more somber colored species.

Spalacopsis (Euthuorus) spinipennis Fisher
(Fig. 2)

Spalacopsis spinipennis Fisher, 1936:347; Breuning, 1962:47.

FEMALE: "Slender, moderately convex above, uniformly reddish brown, the antennal joints slightly paler at bases, and densely clothed with very short, whitish and dark brown pubescence. Head beneath sparsely, coarsely punctate, rather densely clothed with moderately long, curly, whitish hairs; above sparsely, coarsely, punctate, rather densely, irregularly clothed with short, recumbent, brownish yellow hairs. Antenna about as long as the body, rather densely clothed with short, semierect, whitish and yellowish hairs intermixed, and densely ciliate beneath with long, flying, black hairs. Pronotum one-half longer than wide, subequal in width at base and apex, subcylindrical; sides feebly sinuate; parallel; disc stringly convex; surface coarsely, sparsely, irregularly punctate, densely, irregularly clothed with long,

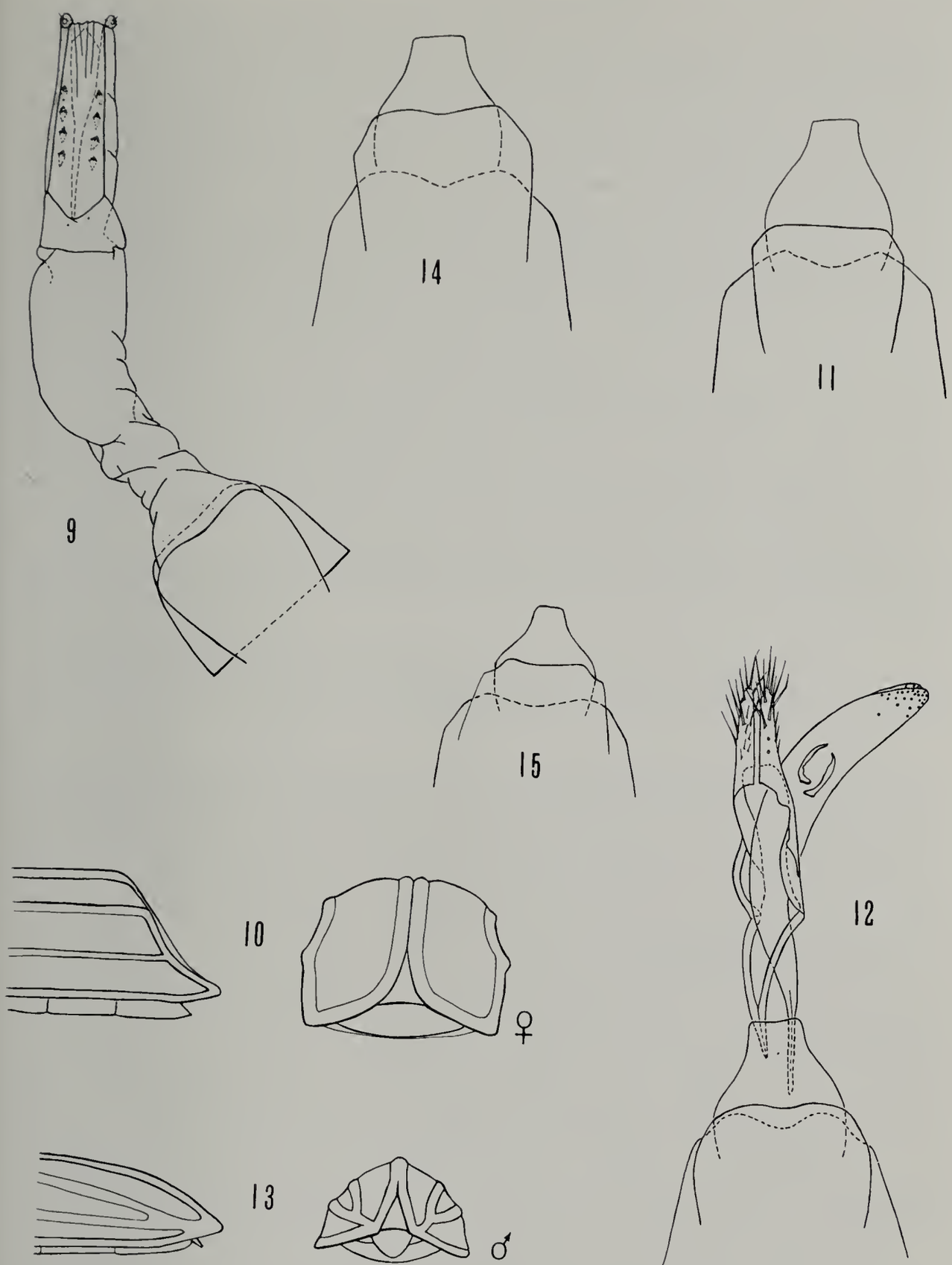

Fig. 9-11: *Spalacopsis (Euthuorus) filum costulatum* Casey: 9) dorsal view of female terminalia; 10) lateral and terminal view of elytral apex, female; 11) dorsal view of male abdominal apex. Fig. 12: *Spalacopsis (Spalacopsis) suffusa* Newman, dorsal view of male terminalia. Fig. 13: *Spalacopsis (S.) chemsaki*, n. sp., lateral and terminal view of elytral apex, male. Fig. 14: *Spalacopsis (S.) stolata* Newman, dorsal view of male abdominal apex. Fig. 15: *Spalacopsis (S.) texana* Casey, same view.

recumbent, whitish and brownish white hairs intermixed, and with a small, oblong, median, glabrous spot. Scutellum quadrate, densely clothed with recumbent, whitish pubescence. Elytra four times as long as pronotum, at base as wide as pronotum; sides obliquely expanded from base to near the middle, then parallel to the tips, which are separately obliquely truncate, with a long, acute spine at outer angles; disc moderately convex, each elytron with three more or less distinct, irregular, longitudinal costae, not including the sutural margin; surface finely, rather densely, irregularly punctate (the punctures arranged in more or less distinct rows basally), sparsely, irregularly clothed with short, recumbent, whitish and brownish pubescence, the whitish pubescence predominating on basal halves, and at apices where it is denser. Body beneath finely, sparsely, irregularly punctate, rather densely, irregularly clothed with moderately long, recumbent, whitish and brownish-white hairs intermixed, the pubescence more uniformly whitish, longer, and curly on the prosternum; last abdominal segment broadly subtruncate or feebly emarginate at apex. Length, 14mm." (Original description).

TYPE: Holotype female, CUBA: Oriente Province, Turquino Peak Region, 10-29-VI-1936, J. Acuña (USNM). The only specimen seen.

This species differs from all members of the genus by the spinose elytral apices.

Spalacopsis (Euthuorus) macra Tyson, NEW SPECIES
(Fig. 3,4,8)

MALE: General color ashy-grey without contrasting ornamentation. Antennae as long as body or slightly longer, moderately fimbriated beginning with segment 3, scape reaching middle of pronotum and clothed with dense, appressed pubescence that obscures the brown integument. Head as long as pronotum, densely covered with ashy-grey pubescence, a faint, lighter colored, longitudinal line is noticeable at middle; surface irregularly punctate throughout, though hidden by dense, appressed pubescence. Prothorax cylindrical but disc flat and slightly concave at middle, callus small and ovoid, at middle of disc; surface irregularly punctate, punctures hidden by pubescence. Scutellum elongate triangular and acute at apex, densely covered with light ashy pubescence. Elytra about as wide as pronotum at base, becoming wider toward middle then slightly tapering to apex, apices moderately produced, separately rounded and shallowly concave; elytral surface, except for a few denuded areas on apical half, densely covered with ashy, brown and light ashy pubescence, any ornamentation vague; hind wings reduced to filaments. Underside with integument dark brown, densely pubescent, sterna 1 to 4 with medio-apical area with lighter pubescence. Length: 10 to 18mm.

FEMALE: Similar to male but differs by the more contrasting general coloration. Most specimens have the apices of elytra lighter in color and less strongly produced, though concave as in male. Length: 7 to 22mm.

TYPE: Holotype female, allotype male: JAMAICA, *St. Andrews,* Hardwar Gap, 4,000′, 25-VII-1966, Howden & Becker (CNCI). Paratypes: 23 specimens as follows: JAMAICA, *St. Andrews*: same data as type, 3-29-VII-1966, Howden & Becker, 8 males, 4 females (CNCI); same data as type, 10-VI-1961, T. H. Farr, 1 female (IJSM); same data as type, 3-I-1960, T. H. Farr, 1 male (IJSM). *Portland:* Port Antonio, 1-7-VIII-1966, Howden & Becker, 2 females (CNCI); Hardwar Gap, VI-1967, T. H. Farr, 2 females (IJSM); same data, VII-1967, T. H. Farr, 1 female (IJSM); same data, VIII-1967, T. H. Farr, 1 female (IJSM);

same data, 19-VI-1968, T. H. Farr, 1 male (IJSM); same data, 28-VI-1959, T. H. Farr, 1 male (IJSM); same data, 16-VIII-1967, T. H. Farr, 1 male (IJSM).

This species is basically similar to *ornatipennis* but its larger size and pointed scutellar apex will separate them. The sexual dimorphism, found only in this species and *ornatipennis,* as well as variations in color and color patterns, help to confuse the 2 species, but they are easily separated on the above characters. *Spalacopsis macra* is apparently restricted to the north-central region of Jamaica (see Fig. 8). Specimens of this species have proven to be the largest recorded for the genus. One paratype from the Institute of Jamaica has been placed in the United States National Museum.

Incertae Sedis

Spalacopsis (Euthuorus) grandis (Chevrolat)

Euthuorus grandis Chevrolat, 1862:255.
Spalacopsis grandis, Aurivillius, 1922:361; Breuning, 1962:46.

TYPE: Type locality: Cuba.

I have seen a photo of Chevrolat's type. In general form and coloration it appears to be but a large individual of *filum* (Klug). However, until the type of *filum* and topotypic specimens of *grandis* are examined, I cannot validate or synonymize this species.

Breuning (1962:46) synonymized *lobata* Breuning under *grandis.* I have seen a photo of Breuning's type, and it is more closely related to *macra* than

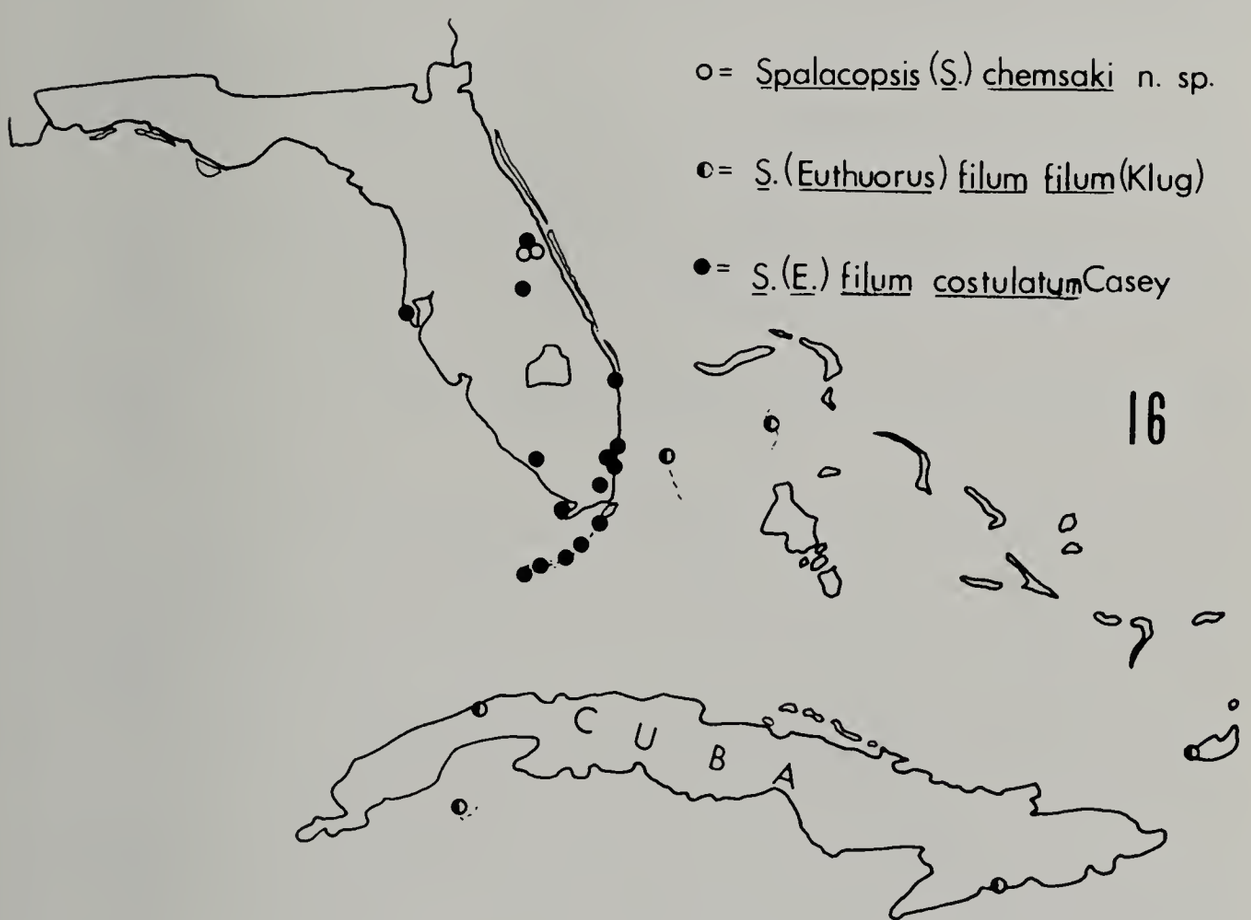

Fig. 16: Known distribution of *Spalacopsis (S.) chemsaki,* n. sp., and *Spalacopsis (E.) filum costulatum* Casey, in Florida, and *Spalacopsis (E.) filum filum* (Klug) in the Bahama Islands and Cuba.

grandis. Because *lobata* has the hind wings partially abbreviated (*grandis* has fully developed hind wings and *macra* has them reduced to filaments), and the type locality is Mexico, I feel *lobata* Breuning should be resurrected from synonymy.

SUBGENUS *Spalacopsis s. str.*

Spalacopsis, Casey, 1913:355.

TYPE SPECIES: *Spalacopsis stolata* Newman.

As mentioned under the generic description, all members of this subgenus have the elytra fused along the suture and the hind wings greatly reduced. Also, they all have the apices of the elytra tapering and slightly asymmetrical, as well as having the fimbriated antennal segments with fewer and less sinuated hairs.

Spalacopsis (s. str.) chemsaki Tyson, NEW SPECIES
(Fig. 13,16)

Spalacopsis suffusa, LeConte, 1852:145; Lacordaire, 1872:704 (in part); Horn, 1885:9 (in part); Leng & Hamilton, 1896:145; Casey, 1913:356; Breuning, 1962:45.

MALE: Integumental color brown to fulvous-brown, underside darker; pubescence sparse and uniform grey, occasionally with irregular lighter dashes

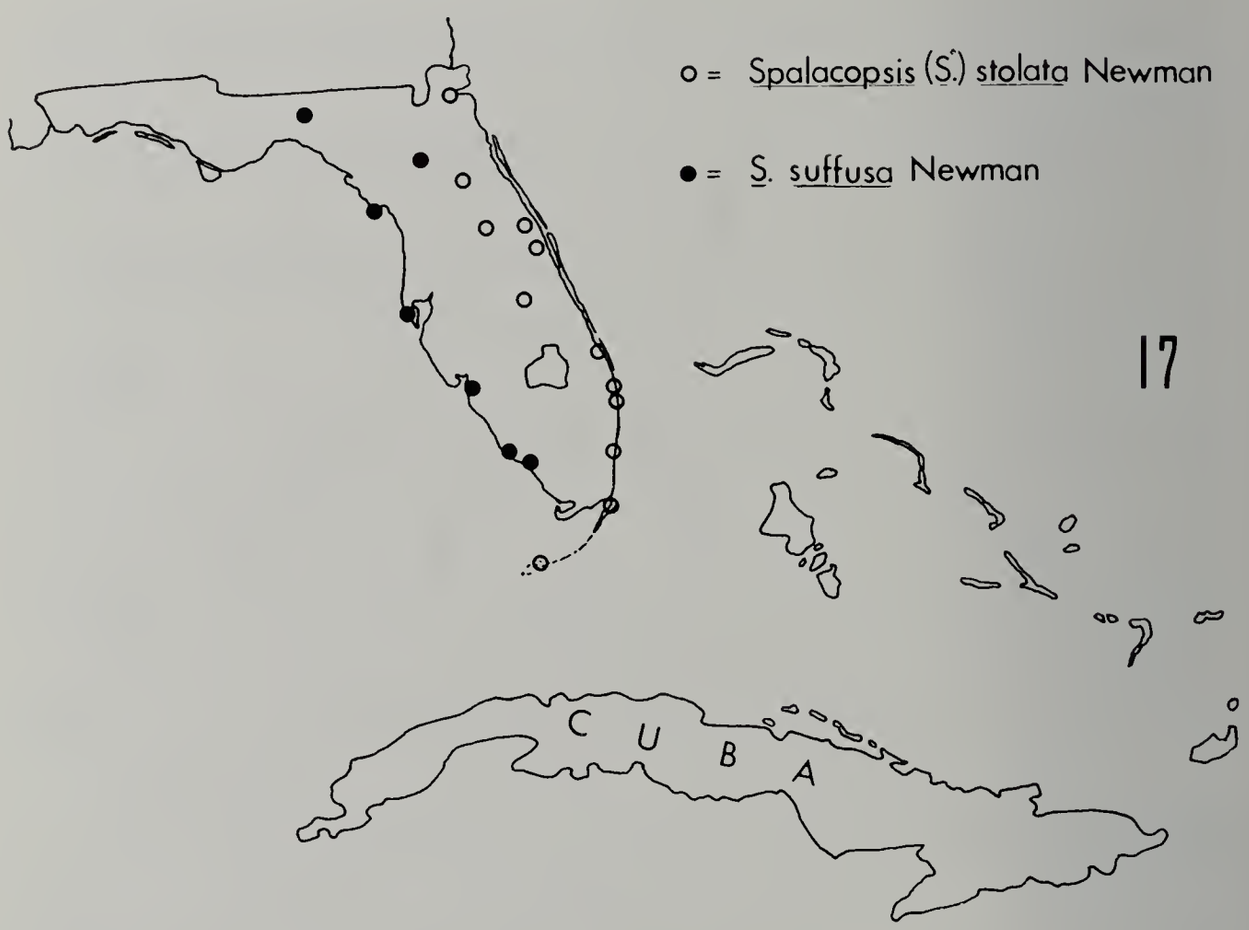

Fig. 17: Known distribution in Florida of *Spalacopsis (S.) stolata* Newman, and *S. (S.) suffusa* Newman.

on elytral costae. Head elongate, longer or as long as pronotum; antennae moderately fimbriated beginning with segment 4, eyes small, lateral, punctures of head coarse and widely separated, mostly obscured by pubescence. Prothorax cylindrical with a small linear callus at middle of disc; punctures confused, coarse, separated by their diameters or more. Scutellum triangular, moderately covered with greyish pubescence. Elytra fused along suture, costae evident, 1st and 5th intervals with two rows of punctures, 2nd and 4th with 1 row; apices asymmetrical, narrower than basal or medial elytral width. Meso- and metasterna heavily punctured, grey pubescent, 8th tergite protruding from the abdominal opening, rotundo-truncate at apex. Length: 6 to 9mm.

FEMALE: Similar to male but 8th tergite absent from abdominal opening and the general body form more robust. Length: 6 to 9mm.

TYPE: Holotype female, allotype male: U.S.A., FLORIDA: *Volusia County,* Lake Ashby, 5-VI, Hubbard & Schwarz (USNM). Paratypes: 4 specimens as follows: same data as type, 2 males, 1 female; FLORIDA: *Volusia Co.,* Enterprise, 1 male. One paratype in each of the following collections: USNM, AMNH, CISC, and the author.

This species, known only from Volusia County, Florida, has gone under the name of *suffusa* for many years (see discussion of *suffusa*). It is perhaps the most easily recognizable of the North American species due to the uniform, sparse pubescence (except for an occasional whitish spot or 2 on the elytral costae). Also, the drab, over-all grey-brown color will separate it from the other forms. It is my pleasure to name this taxon after Dr. J. A. Chemsak, University of California, Berkeley.

Spalacopsis (s. str.) stolata Newman
(Fig. 7,14,17)

Spalacopsis stolata Newman, 1842:304; LeConte, 1852:145; Melsheimer, 1853:110; Lacordaire, 1872:704; Schwarz, 1878:457; Horn, 1885:9; Henshaw, 1885:104; Leng & Hamilton, 1896:146; Casey, 1913:357; Craighead, 1923:134.

Spalacopsis pertenuis Casey, 1913:357; Mem. Coleop. 4:357; Casey, 1924:294; Mem. Coleop. 11:294; Breuning, 1962:44, Pesquisas 6(13):44. NEW SYNONYMY.

MALE: Integumental color reddish-brown to dark brown, underside darker; pubescence a mixture of ashy, white, and yellow-grey colors, region bordering elytral suture dark brown, lateral margins densely yellow-grey pubescent. Head usually as long as pronotum, covered with dense cinereous, white, and ashy-brown pubescence that usually obscures integument; scape longer than head, densely pubescent, mostly obscuring integument, segments 3 to 10 with many ventral fimbriations. Prothorax cylindrical, densely pubescent, integument mostly obscured, callus when present, small and ovoid; head and pronotum with dorso-lateral and a medial whitish lines. Scutellum triangular, densely pubescent with whitish hairs. Elytra mostly densely pubescent, sutural area and costal intervals with dark hairs and reduced pubescence; discal costae with variable whitish lines or spots, these usually slightly oblique; lateral margins with yellow-grey pubescence dense and with one or more whitish spots on the apical third. Underside densely pubescent. Length: 6 to 9mm.

FEMALE: Similar to male but body more robust. Length: 6 to 11mm.

TYPE: Holotype female, FLORIDA; Duval County, St. Johns Bluff, Doubleday & Foster (BM); of *pertenuis,* FLORIDA; Palm Beach, Casey Collection (USNM).

MATERIAL EXAMINED: FLORIDA: *Duval Co.*: Jacksonville, 3-III-1955, P. Wygodzinsky, 1 male. *Palm Beach Co.*: Delray Beach, 25-XII-1968, A. Moldenke, on *Verbesina,* 2 females; Delray Beach, 24-VI-1949, L. S. Light, on mango, 1 female; Lake Worth, 1 male, 1 female. *Martin Co.*: Jupiter, 24-IV, Hubbard & Schwarz, 1 male. *Dade Co.*: Biscayne, 23-V, Hubbard & Schwarz, 1 male, 1 female; Biscayne, 25-IV, Hubbard & Schwarz, 1 female. *Monroe Co.*: Key Largo, Wickham Collection, 1 female; Big Pine Key, 6-III, E. A. Schwarz, 1 female; Florida Keys, 1 female; Stock Island, 27-XII-1954, H. V. Weems, on *Flaveria linearis,* 1 male. *Putnam Co.*: Crescent City, Hubbard & Schwarz, 2 males. *Volusia Co.*: Enterprise, 14-II, D. M. Castle, 1 male; DeLeon Springs, 19-IV-1960, R. E. Woodruff, 1 male, 1 female; Lake Ashby, 1-VI, Hubbard & Schwarz, 1 female; Volusia Co., 24-II-1954, H. A. Denmark, 2 males. *Brevard Co.*: Indian River, 1 male. *Osceola Co.*: Kissimmee, 1 female. *Lake Co.*: Lake Co., 10-V-1956, H. V. Weems, 1 male. Additional material: FLA., Cazier Collection, 1 female; FLA., 1 male; Buena Vista, 28-VI-1918, M. Kisliuk, 1 female.

This species is very similar to *suffusa* but differs in the larger size, denser pubescence, more ornamented elytra, and distribution. *Spalacopsis stolata* is apparently restricted to the Atlantic Slope drainage system in Florida (Fig. 17). By the number of specimens examined it appears to be the most common species of the subgenus *Spalacopsis.* Casey's *pertenuis* is a small specimen of *stolata.* Breuning (1962:44) incorrectly synonymized *pertenuis* under *protensa* Pasco, a Mexican species.

Spalacopsis (s. str.) suffusa Newman
(Fig. 12,17,19)

Spalacopsis suffusa Newman, 1842:305; LeConte, 1852:145; Lacordaire, 1872:704 (in part); Schwarz, 1878:457 (in part); Horn, 1885:9 (in part); Breuning, 1962:45 (in part).
Spalacopsis suturalis Hamilton, *in* Leng & Hamilton, 1896:145; Casey, 1913:356. NEW SYNONYMY.
Spalacopsis exilis Casey, 1924:294. NEW SYNONYMY.

MALE: Integument brown to reddish-brown, first elytral interval appearing denuded, lateral margins densely pubescent becoming sparser dorsally. Antennal scape reaching to middle of pronotum, pubescence moderate, integument easily seen, segments 3 to 9 with a few (3 to 6) ventral hairs. Head as long as pronotum, covered with coarse pubescence that only partially obscures the integument and punctures. Prothorax cylindrical, pubescence moderate, integument always showing through, polished callus present, absent in 2 specimens, small, linear, generally ovoid; both head and pronotum with dorso-lateral and a medial whitish longitudinal lines. Scutellum triangular, covered with dense white pubescence. Elytra sparsely pubescent dorsally, sutural area with darker pubescence as to appear denuded, discal costae with variable areas of whitish pubescence; lateral margins usually densely covered with yellow-grey to grey pubescence. Legs with tarsal segments shining, sparsely pubescent. Length: 5 to 7mm.

FEMALE: Similar to male but with body usually more robust and elytra wider at middle. Length: 6 to 7mm.

TYPE: Holotype female, FLORIDA (no other data on specimen), (BM). Type locality as listed in the literature: St. Johns Bluff, Florida; of *suturalis,* Florida, Punta Gorda, Hubbard & Schwarz (3 cotypes, USNM); of *exilis,* Florida, Chokol (Chokoloskee, Collier Co.), W. S. Blatchley, Casey Collection (USNM).

MATERIAL EXAMINED: FLORIDA: *Charlotte Co.*: Punta Gorda, 9-IV-1952, O. Peck, 1 male. *Alachua Co.*: Newnan's Lake, 4-VII-1952, B. Theuer, 1 male; Alachua Co., 21-X-1956, R. A. Morse, 2 males. *Jefferson Co.*: Monticello, 4-8-X-1914, 1 female. *Collier Co.*: Naples, 28-III-1947, J. W. Green, 1 male. *Volusia Co.*: New Smyrna, 30-X-1927, E. D. Ball, 1 male. *Levy Co.*: Sea Horse Key, 11-V-1966, G. H. Wharton, 1 male. *Pinellas Co.*: Dunedin, 3-X-1927, W. S. Blatchley, 1 male. *Dade Co.*: Royal Palm Park, 24-III-1929, E. G. Linsley Collection, 1 male, 2 females; same data, 24-II-1926, 1 male.

Newman's type specimen was found to be a very worn, rubbed specimen of what had been considered to be *suturalis* Hamilton. Casey's *exilis* type is atypical in that it is sparsely pubescent but with very coarse hairs. From the material on hand *suffusa* is primarily found in the Gulf Coast drainage system of Florida (Fig. 17). Newman stated that the types of both his *stolata* and *suffusa* were from St. John's Bluff, eastern Florida. The type of *suffusa* has no other data than Florida and was probably collected along the St. John's River, the boundary of the Atlantic and Gulf Coast drainage systems in Florida.

Since its description, the name *suffusa* has been incorrectly applied to the new species here described as *chemsaki.* This is because Newman, in his original description, stated that the color was pale grey without shading, a fact that does not conform with his type specimen. Specimens from coastal western and southern Florida have the elytral pubescence longer and denser, giving them a strongly ornamented appearance. Specimens from inland and northern localities tend to have the pubescence shorter and sparser, thus vaguely ornamented (Fig. 19). The *suturalis* type is of the coastal form. *Spalacopsis suffusa* is closely related to *texana* Casey and, to a lesser degree, to *stolata.* They all appear to have evolved from the same parent species. Breuning (1962:43) incorrectly synonymized *suturalis* under *stolata.*

Spalacopsis (s. str.) texana Casey
(Fig. 15,18)

Spalacopsis texana Casey, 1891:146; Leng & Hamilton, 1896:146; Casey, 1913:356; Breuning, 1962:44.
Spalacopsis stolata, LeConte, *in* Schwarz 1878:470 (in part).

MALE: Integument dark brown to piceous, pubescence variable, usually dark with areas of white condensed as spots or lines on the elytral costae. Head about as long as pronotum, densely covered with grey and brown pubescence which partially covers the integument but most punctures show through; antennae as long as body, moderately fimbriated beginning with segment 3. Prothorax cylindrical with moderately dense pubescence which obscures most of integument, median polished callus small and linear; head and pronotum with vague dorso-lateral and a medial light pubescent lines. Scutellum triangular, densely clothed with white hairs. Elytra widest at apical third, apices separated and slightly asymmetrical; disc densely pubescent (on type specimen) less so in all other material examined, except for variable dark areas along the suture, these darker areas usually bordered apically by an oblique white line or spot which may join together. Underside uniformly, densely

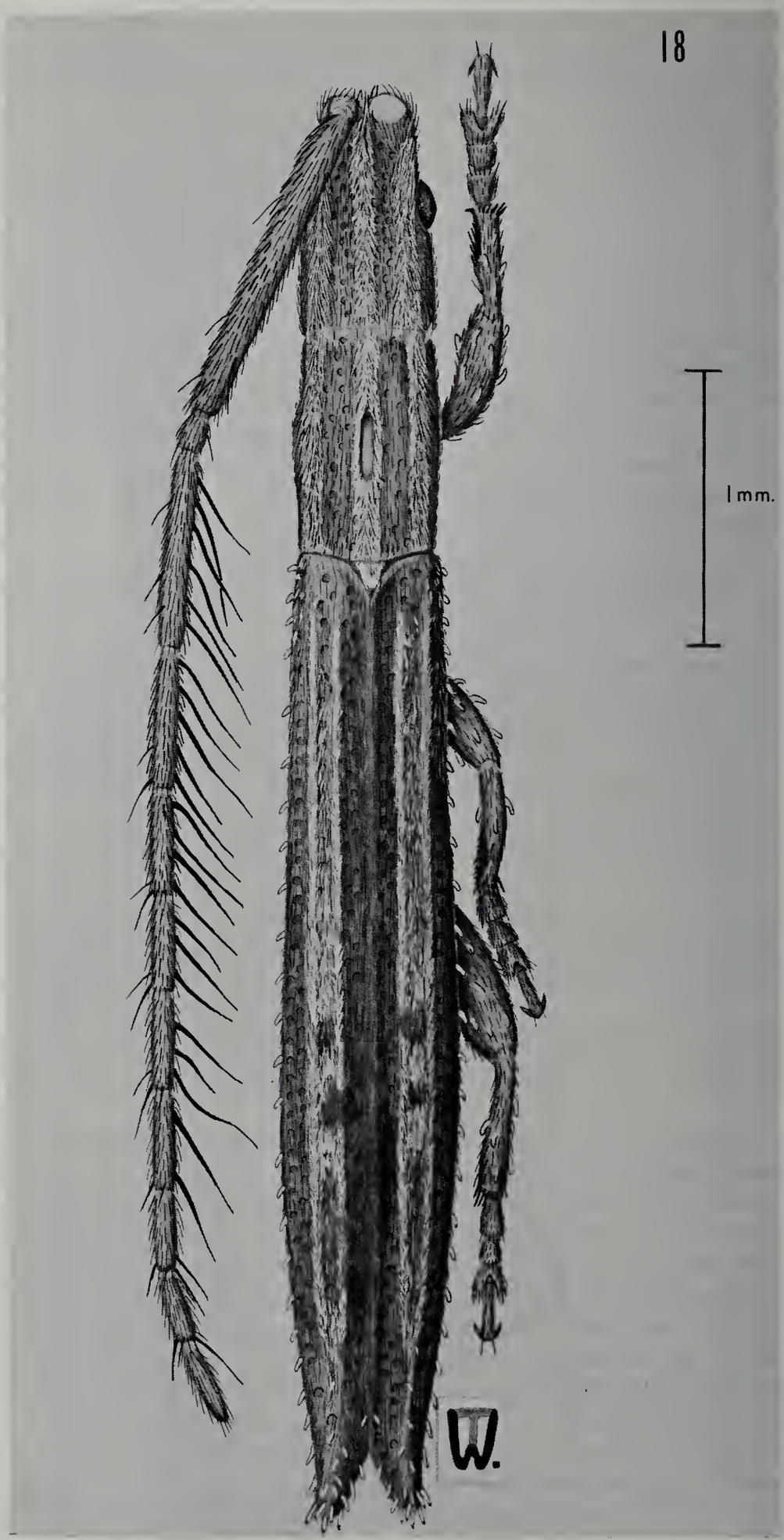

Fig. 18: *Spalacopsis (Spalacopsis) texana* Casey, male.

pubescent with apically converging white lines on sterna 2 to 4. Length, 5 to 6mm.

FEMALE: Similar to the male but slightly larger, more robust, and with pubescent ornamentation of elytra less distinct. Length, 5 to 9mm.

TYPE: Holotype female, TEXAS: Casey Collection (USNM).

MATERIAL EXAMINED: TEXAS: *Chambers Co.*: Anahuac, 10-X-1918, H. S. Barber, on *Hostelezkya,* 1 male. *Brooks Co.*: Falfurrias, III-1936, S. G. Kelley, on lantana, 1 male. *San Patricio Co.*: Welder Wildlife Refuge, nr. Sinton, 4-7-VIII-1963, A. T. Howden, 4 males, 4 females; same locality, 27-VIII-1970, C. W. O'Brien, 1 female. Additional Texas material: Mifflin, 26-VI-1952, H. E. Cott, 1 female; same locality, 6-VII-1952, H. E. Cott, 1 female; TEX. Cazier Collection, 1 female.

This species is allied to *suffusa* and to a lesser degree to *stolata*. It differs markedly from both in the very dark integument, the lack of dense yellow-grey pubescence on the lateral margins of the elytra, and in the distribution.

The locality label, on Casey's type specimen bears no other data than TEX. (without identifying marks). It may have been collected near the Rio Grande River in southwest Texas (determined from an unpublished list of Casey collection localities and corresponding identifying label marks, in the USNM). From the material on hand the range is apparently an inland strip along coastal Texas. The type specimen is the largest seen (9mm) and is very densely covered with fine pubescence. The smallest specimen seen for the genus was the male listed above from Falfurrias (4½mm).

Spalacopsis (s. str.) unicolor Tyson, NEW SPECIES

Spalacopsis filum, Wolcott, 1948, J. Agr. Univ. Puerto Rico 32(2):341 (in part?).

FEMALE: Head longer than prothorax, densely covered with long greyish pubescence, completely obscuring integument and punctures; antennae nearly as long as body, fimbriated beginning with segment 2, scape densely pubescent. Prothorax cylindrical, densely covered with long grey pubescence; head and pronotum with 3 faint longitudinal whitish lines, 1 medial the others dorso-lateral. Scutellum covered with whitish pubescence. Elytra fused along suture, slightly tapering apically, apex semicircular incised with outer margin nearly acuminate, surface densely clothed with long greyish pubescence, obscuring punctation. Underside densely clothed with grey pubescence. Length: 6½mm.

TYPE: Holotype female, PUERTO RICO: Aibonito, Diaz Fitica, 6-X-1933, R. G. Oakley (USNM). The only specimen seen.

Except for *chemsaki,* this is the only unicolorous species observed. It differs greatly from *chemsaki* in the very dense pubescence and the widely separated, incised apices of the elytra. Wolcott's record (1948:341) " . . . on the flowers of *Malpighia"* could possibly refer to this species. I have seen only 1 specimen of *filum* (Klug) from Puerto Rico, but the 2 species are easily separated.

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Fig. 19: *Spalacopsis (Spalacopsis) suffusa* Newman, male; ventral, dorsal, and lateral aspects. Photos by Robert Ing.

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